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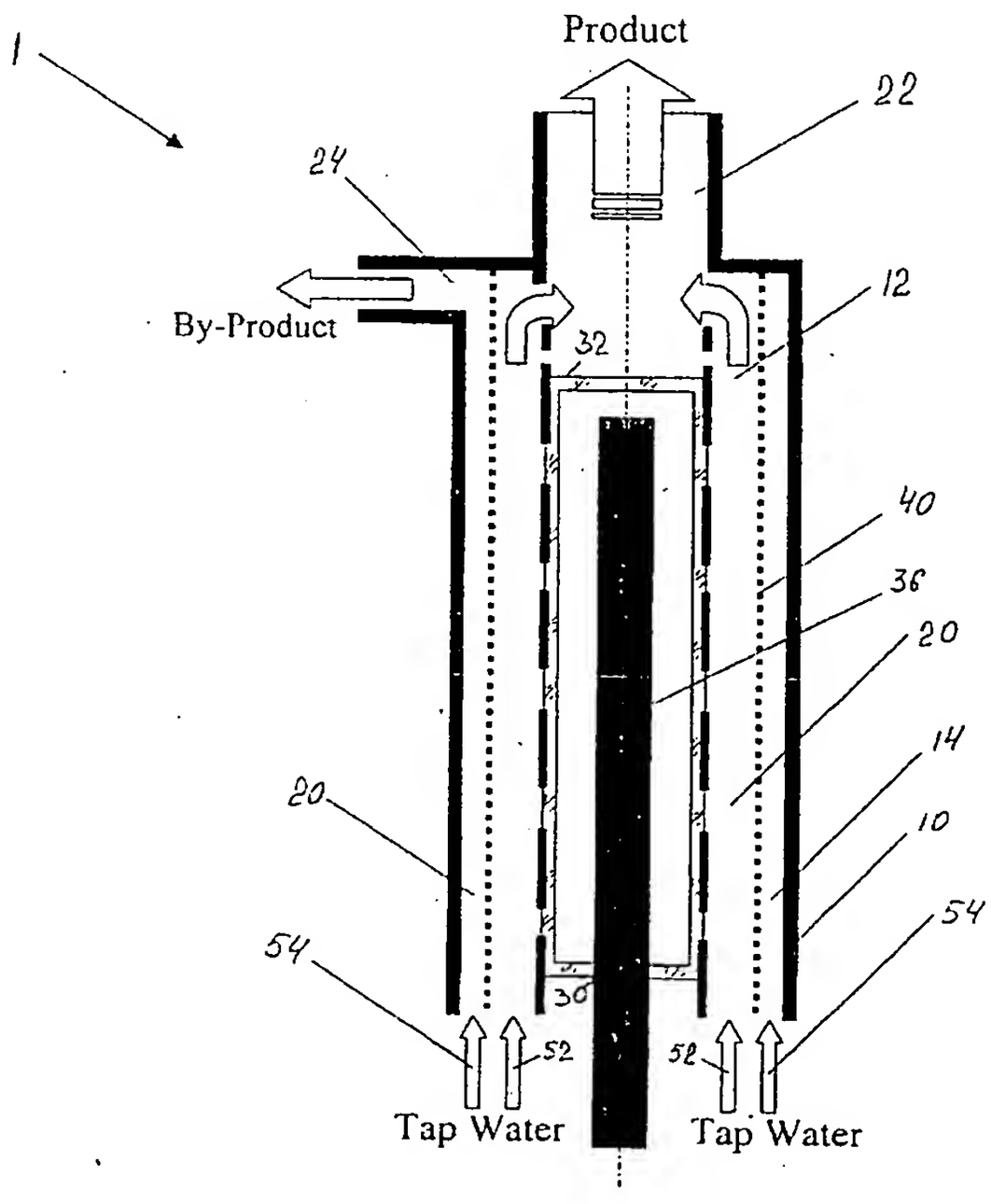
[Continued on next page]

(54) Title: ACTIVATED WATER APPARATUS AND METHODS



(57) Abstract: An apparatus (1) subjects water to waves from an RF plasma. This allows continuous production of "activated water" characterized by cluster sizes below about 4 molecules per cluster, water having pH below 4 or above 10, or water having ORP of less than -350 mV or more than + 800 mV. The basic frequency of the plasma is preferably between 0.44 MHz and 40.68 MHz, and the plasma is preferably modulated at a frequency between 10 kHz and 34 kHz. Flow rates typically range from 20 l/hr to about 2000 l/hr. Activated water can be used for many purposes, including antimicrobial cleaning of worktable, floor, wall, knife, transport and other surfaces, for example, in meat processing facilities and hospitals.

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SI, SK, SK (utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US01/49310

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B01J 19/08; H05F 3/00
US CL : 422/186, 186.04; 204/164

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : C25D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 4,954,320 A (BIRMINGHAM et al.) 04 September 1990 (04.09.1990), col. 2, line 67 to col. 3, line 2; col. 3, lines 15-25; col. 4, lines 66-68; col. 6, lines 13-16; col. 6, lines 63-66; col. 8, lines 40-45, and Fig. 4.	1-2, 6-8 --- 3-5,9
Y	US 5,965,009 A (SHIMAMUNE et al.) 12 October 1999 (12.10.1999), col. 8, lines 30-32.	13-16,18
Y	JP 11-253522 A (YAMADA, Makoto) 21 September 1999 (21.09.1999), abstracts.	13-15,17

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
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Continuation of B. FIELDS SEARCHED Item 3:
WEST, STN
search terms: water, radio frequency, plasma

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(54) 헤어 드라이어

요약

본 고안은 헤어드라이어에 관한 것으로 종래의 헤어드라이어는 단순히 온풍이나 냉풍만이 분출되는 것이어서 모발의 질을 좁게 손질하기 어렵고 퍼머의 웨이브 다음을 방지할 수 없는 문제점이 있었다.

본 고안은 종래의 문제점을 시정 할 목적으로 헤어드라이어(A)의 공기흡입구(10) 에서 공기분출구(21)에 이르는 유로 내면에 시암을 분쇄한 사암 분상체와 2종류이상의 다원소광물을 분쇄하여 형성한 다원소광물 분상체를 소성하여서 형성한 분상체 코오팅층(33)(41)을 형성하여 분상체 코오팅층(33)(41)에서 항상 발생되는 음이온을 온풍이나 냉풍으로 모발에 불어대면 음이온의 작용으로 모발의 수분이 미네랄화하여 모발의 단백질을 활성화 시키어 신속한 건조와 이온의 효과에 의하여 통풍셋트의 효과를 높이고, 셋트 시간을 단축하며 셋트한 후 헤어 스타일을 장시간 유지시키며 롯트퍼머의 경우 모발의 강도와 광택을 좋게하고 퍼머의 웨이브 다음을 막을수 있게 한 것이다.

도면